

## Claims

1. An apparatus for diagnosing a state of health of an organ in a human or  
5 animal body, the apparatus including:

an electrical signal generator;

a calibration electrode, a measurement electrode, and a reference electrode, for  
connection, in use, to the generator, wherein one of the calibration and measurement  
electrodes is a point electrode having a small skin-contactable surface area, and the  
10 other electrode, respectively, has a significantly larger skin-contactable surface area  
than the point electrode;

recording means which is configured to record a first measured value of a first  
parameter which is dependent on the resistance or impedance between the calibration  
and reference electrodes when the calibration electrode is placed in contact with a first  
15 zone of skin corresponding to the organ and the reference electrode is placed in  
contact with another zone on the body, and an AC potential difference is applied  
between the calibration and reference electrodes by the generator;

recording means which is configured to record a second measured value of a  
second parameter which is dependent on the resistance or impedance between the  
20 measurement and reference electrodes when the calibration electrode has been  
replaced by the measurement electrode and the same AC potential difference is  
applied between the measurement and reference electrodes; and

means for comparing the first and second measured values to obtain a third  
value which is an indicator of the state of health of the organ to which the first zone of  
25 skin corresponds.

2. An apparatus as claimed in claim 1, wherein the frequency of the AC signal is about 250 Hz.

5 3. An apparatus as claimed in claim 1, which includes a display means for indicating the first zone of skin onto which the calibration and measurement electrodes should be placed in order to obtain a diagnosis for a particular organ.

4. An apparatus as claimed in claim 3, wherein the display means indicates  
10 zones of skin which are located on a foot or an ear.

5. An apparatus as claimed in claim 4, wherein the third value is expressed as a ratio of the first and second measured values.

15 6. An apparatus as claimed in claim 1, which includes communication means for communicating, to an operator of the apparatus, the state of health of the diagnosed organ as being either healthy, normal, sub-acute or acute, depending on the third value.

20 7. A method for diagnosing a state of health of an organ in a human or animal body, the method including the steps of:

placing a calibration electrode on or near a zone of skin which corresponds to the organ and placing a reference electrode in contact with another zone of skin on the same body;

recording a first measured value of a first parameter which is dependent on the resistance or impedance between the calibration and reference electrodes when an AC potential difference is applied between the calibration and reference electrodes;

replacing the calibration electrode with a measurement electrode, wherein one  
5 of the calibration and measurement electrodes is a point electrode having a small skin-contactable surface area, and the other electrode, respectively, has a significantly larger skin-contactable surface area than the point electrode;

recording a second measured value of a second parameter which is dependent on the resistance or impedance between the measurement and reference electrodes  
10 when the same AC potential difference is applied between the measurement and reference electrodes; and

comparing the first and second measured values to obtain a third value which is an indicator of the state of health of the organ to which the first zone of skin corresponds.

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8. A method as claimed in claim 7, wherein the frequency of the alternating current while obtaining the first and second values is about 250 Hz.

9. A method as claimed in claim 7, wherein the third value is expressed  
20 as a ratio of the first and second values.

10. A method as claimed in claim 7, wherein the measurement electrode is placed on an outer ear, or on a sole of a foot, having the zone of skin which corresponds to the organ.

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11. A method as claimed in claim 10, which includes the step of using a display means to indicate the zone of skin of a foot or an ear onto which the measurement electrode should be placed in order to obtain a diagnosis for a particular organ.